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ID

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/442,111	11/17/99	DEFREES	S 14137-013820

020350 HM12/0116
TOWNSEND AND TOWNSEND AND CREW
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO CA 94111-3834

EXAMINER

FRONDA, C

ART UNIT	PAPER NUMBER
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1652

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DATE MAILED:

01/16/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/442,111

Applicant(s)

Defrees et al.

Examiner
Christian L. Fronda

Group Art Unit
1652



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 1 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-71 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☐ Claim(s) _____ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims 1-71 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1652

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claim 4, drawn to a reaction mixture comprising a plant or microorganism cell that produces a fucosyltransferase, classified in class 435, subclass 193.
 - II. Claims 5, 12, 13, and 22, drawn to a reaction mixture comprising a plant or microorganism cell that produces a sialyltransferase, classified in class 435, subclass 193.
 - III. Claim 14, 15, 19-21, 23, 29, 30, and 32-37, drawn to a reaction mixture comprising a plant or microorganism cell that produces a β 1,4-GalNAc transferase, classified in class 435, subclass 193.
 - IV. Claim 16, 17, 25-27, and 32, drawn to a reaction mixture comprising a plant or microorganism cell that produces a galactosyltransferase, classified in class 435, subclass 193.
 - V. Claim 50-52, drawn to a cell that produces a sulfotransferase, classified in class 435, subclass 193.
 - VI. Claims 53-71, drawn to a method of producing a product saccharide comprising contacting a microorganism or plant cell with an acceptor saccharide, wherein the cell comprises an enzymatic system for forming a nucleotide sugar and a recombinant glycosyltransferase which catalyzes the transfer of a sugar from the nucleotide sugar to the acceptor saccharide to produce the product saccharide, classified in class 435, subclass 97.

Generic claims 1-3, 6-11, 18, 24, 28, 31, and 38-49 are generic only to Groups I-V.

2. The inventions are distinct, each from the other because of the following reasons: Inventions of Groups I-V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The fucosyltransferase of Group I, the sialyltransferase of Group II, the β 1,4-GalNAc transferase of Group III, the galactosyltransferase of Group IV, and the sulfotransferase of Group V are independent chemical entities and require different literature searches. Furthermore, a search of each of the inventions of Groups I-V in the patent and non-patent literature cannot be made without serious burden because the inventions require separate searches that have different limits, boundaries, scope, and

Art Unit: 1652

subject matter.

Each of the inventions of Groups I-V are related to the invention of Group VI as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the products as claimed can be practiced with other materially different products such as using chemical reagents and catalysts in a chemical synthesis of a saccharide. For example, Kovac *et al.* teach the chemical synthesis of methyl beta-glycosides of beta-(1-6)-linked D-galacto-oligosaccharides by a stepwise and a blockwise approach which does not require the use of cell based biological systems or enzymes (see abstract). Furthermore, a search of each of the inventions of Groups I-VI in the patent and non-patent literature cannot be made without serious burden because the inventions require separate searches that have different limits, boundaries, scope, and subject matter.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

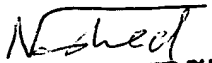
3. Claims 1-3, 6-11, 18, 24, 28, 31, and 38-49 are generic only to the inventions of Groups I-V. If Group I, II, III, IV, or V is elected, then generic claims 1-3, 6-11, 18, 24, 28, 31, and 38-49 will also be examined but only to the extent of the subject matter of the elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L. Fronda whose telephone number is (703)305-1252. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703)308-3804. The fax phone number for this Group is (703)308-0294. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703)308-0196.

CLF

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NASHAAT T. NASHED PH.D.
PRIMARY EXAMINER